

Indiana University Bloomington IUScholarWorks

Citation for this item

Citation format and information for this document is found at:

<http://hdl.handle.net/2022/17489>

This paper is from:

Dr. Ruth C(lifford) Engs - Presentations, Publications & Research Data Collection.

This collection is found at IUScholarWorks: <http://hdl.handle.net/2022/16829>

When in the collection and within a category, click on “title” to see all items in alphabetical order.

The Collection

This document is part of a collection that serves two purposes. First, it is a digital archive for a sampling of unpublished documents, presentations, questionnaires and limited publications resulting from over forty years of research. Second, it is a public archive for data on college student drinking patterns on the national and international level collected for over 20 years. Research topics by Dr. Engs have included the exploration of hypotheses concerning the determinants of behaviors such as student drinking patterns; models that have examine the etiology of cycles of prohibition and temperance movements, origins of western European drinking cultures (attitudes and behaviors concerning alcohol) from antiquity, eugenics, Progressive Era, and other social reform movements with moral overtones-Clean Living Movements; biographies of health and social reformers including Upton Sinclair; and oral histories of elderly monks.

Indiana University Archives

Paper manuscripts and material for Dr. Engs can be found in the IUArchives

http://webapp1.dlib.indiana.edu/findingaids/view?doc.view=entire_text&docId=InU-Ar-VAC0859

The Drinking Behaviors of a Sample of University Students in Nanning, Guangxi Province, People's Republic of China

Zhuo-Ping Lu,¹ Ruth C. Engs,^{2,*} and David J. Hanson³

¹Guangxi Medical University, Nanning, People's Republic of China

²Indiana University, Bloomington, Indiana, USA

³State University of New York, Potsdam, New York, USA

ABSTRACT

A Chinese translation of the Student Alcohol Questionnaire was administered to a sample of 190 students at two universities in Nanning, China. Males consumed alcohol significantly more frequently and in greater quantities than did females. A significantly higher proportion of males also experienced problems resulting from their drinking. Beer was the alcoholic beverage of choice for both males and females. Most students of both genders drank with friends, and most have also consumed with their parents; about half reported that their parents approved of their alcohol consumption. The results support earlier observations that moderate drinking is widely accepted in the Chinese culture and results in few problems.

Key words. University students; Drinking behaviors; Chinese

INTRODUCTION

A variety of alcoholic beverages have been used in China since prehistoric times (Granet, 1957). They have been widely used in all segments of Chinese society as a source of inspiration, for hospitality, and as an antidote for fatigue (Samuelson, 1878; Fei-Peng, 1982).

The Chinese have long been recognized as a group that uses alcohol in moderation and that experiences very few drinking problems compared to North Americans and some Northern Europeans (Hsu, 1970; La Barre, 1946).

Recent studies of Chinese in China, Taiwan, Singapore, and the United States indicate that most consume alcohol in moderation, on special occasions, and where there are social controls on their drinking. Very few experience any drinking problems (Pai, 1991; Helzer et al., 1990; Chi, et al., 1988, 1989; Akutsu et al., 1989; Ahern, 1985; Yu et al., 1985; Yu and Liu, 1986/1987; Isralowitz and Hong, 1988; Kitano and Chi,

1985; LeMarchand et al., 1985; Sue et al., 1985). (See Table 1 for details of this literature.)

It is commonly known that males in western cultures drink much more frequently and in larger amounts than females. A few studies suggest that this is also found among Chinese cultural groups (Sue et al., 1985; Yu et al., 1985). However, the differences between male and female drinking in Chinese culture may disappear with age (Weatherspoon et al., 1994; Yu and Liu, 1986/1987).

Reports have suggested that male university students consume more alcohol than female students in Western cultures (Hanson and Engs, 1990). However, the literature concerning students in Asian cultures is sparse. One study involving Chinese students in Singapore found that 72% of males and 52% of females consumed alcohol (Isralowitz and Hong, 1988).

Most reports concerning Chinese drinking patterns have been based on those living outside of China. No literature was found concerning the drinking patterns of students in the People's Republic of China in either the English or Chinese languages. In view of the fact that males consume more alcohol than females and tend to have more problems related to alcohol in other countries, this study was conducted to determine if these differences are also found among university students in one community of the People's Republic of China.

METHODS

Sample

A convenience sample was used for this study. The sample consisted of undergraduate students attending Guangxi University and Guangxi National College in Nanning, the capital of Guangxi province. This predominantly ru-

Table 1.

The Use and Misuse of Alcohol by Chinese: Selected Parameters, Processes, and Studies

Author	Year	Country	Data source	Data collection	Respondent/Subject	Comparison group(s)	Data collected	Results	Limitations
Pai	1991	USA	Healthier People (the Health Risk Appraisal Questionnaire)	Convenience sample of 100 Chinese graduated students with 42% response rate	Chinese graduate students from Taiwan (R.O. C.) and China (P.R.O.C.)	Non-Chinese graduate students	Proportion of students who drink	36% of Chinese students reported drinking, 31% reported abstaining and 34% provided no information. There were no heavy drinkers. 69% of non-Chinese were drinkers and 19% were heavy drinkers	34% of Chinese respondents did not provide information on drinking
Chi et al.	1989	USA	Drinking behaviors based on questions from Cahalan's quantity, Frequency, and Variability Scale	Purposive sampling based on Los Angeles (CA) telephone book	298 Chinese-Americans, 295 Japanese-Americans, and 280 Korean-Americans who completed the interviews	Japanese-American and Korean-American residents of Los Angeles (CA)	Proportions of abstainers, moderate drinkers, and heavy drinkers	Chinese-Americans had highest proportion of moderate drinkers and lowest proportion of heavy drinkers, compared to Japanese-Americans and Korean-Americans	Refusal rate not reported
Klatsky et al.	1977	USA	Medical treatment records	Analysis of treatment records for patients aged 15-79 for period 1964-1968	Asian patients in Kaiser-Permanente Medical Care Program	Caucasian and Afro-American patients in same medical care program	Proportions of drinkers among Asian patients, of whom 57% were Chinese	Asian sample had many more abstainers among both males and females than did comparison groups	Sample included 43% non-Chinese Asians; data are now dated
Yu et al.	1984	USA	1977 National Health Interview Study	Interview survey of 41,000 households nationwide	One-third subsample of persons 20 years and older	None	Drinking frequency of Asian/Pacific Americans	More Asian/Pacific Americans were abstainers than frequent drinkers (3 or more times per week)	The Asian/Pacific American category cannot be disaggregated to identify Chinese-Americans
Israelowitz and Hong	1986/1987	Singapore	Engs and Hanson's Student Alcohol Questionnaire	Questionnaires mailed to stratified random sample of 1,840 students, with	1,160 college students in Singapore (767 Chinese, 127 Malay, and 185 Indian students)	College students in Israel and the USA	Quantity and frequency of drinking as well as nature and extent of	61% of respondents were drinkers (72% of men and 52% of women). A	Sample included 34% non-Chinese students

					a 63% usable response rate		drinking problems	much lower proportion of students in Singapore reported experiencin g drinking problems compared to students in Israel ant the USA	
Yu and Liu	1987	USA	Questions asked in an exploratory study of cognitive impairment	Interviews	Clients aged 50 years or older entering the Chinese-American Service League in Chicago=s Chinatown	None	Proportion of drinkers	While the proportion of abstainers was high, it decreased with advancing age	Sample (n=142) nonrandom sample
Sue et al.	1985	USA	Data collected but unanalyzed and unreported by Kitano and Chi (1985)	Interviews	Heads of households in Los Angeles (CA): Chinese n=298, Japanese n=288, Korean n=280	Japanese- Americans and Korean- Americans	Proportions of abstainers, moderate drinkers, and heavy drinkers	Chinese- Americans dramatically less likely to be heavy drinkers	Lack of detailed questions regarding drinking patterns, especially in relation to acculturatio n

ral inland province is located in the southeastern part of the People's Republic of China. Approximately 7,000 students attended Guangxi university and about 3,500 attend Guangxi National College (Guangxi yearbook Editorial Group, 1992; Gu and Pen-Feng, 1993).

During the autumn term of the 1993-1994 academic year, students in several "study classrooms," where students are assigned to study when not attending classes, were asked to participate in the Bsurvey by the Chinese author. The students were told the study was a collaborate effort with American researchers and that responses were anonymous. The response rate was 100%. Of the 190 individuals who completed questionnaires, 55.3% were liberal arts and 44.7% were science and engineering students. In terms of class year, 37.9% were first, 48.4% second, 5.3% third, and 8.4% were fourth year students. Of the total sample, 58.5% were male and 41.5% female. The mean age was 21.1 years and ranged from 18 to 35 years of age.

Survey Instrument

Parts of the *Student Alcohol Questionnaire* (Engs, 1974; Engs and Hanson, 1994) were used for this study. This instrument is highly reliable and has been used by several researchers studying university students' drinking patterns in Western and Asian cultures over the past few years (Engs and Aldo-Benson, 1995; Hayworth-Hoeppner et al., 1993; Hong and Isralowitz, 1989). The reliability of the 19 items selected for the Chinese version were recalculated. The Spearman-Brown reliability coefficient was .98, Chronbach's alpha was .90, and Gutman's split half (see Table 2), the second consisted of 11 items related to drinking behaviors (See Table 3) and the third category included five items assessing attitudes toward drinking and perceived attitudes of significant others toward the respondent's alcohol consumption (see Table 4). The students completed this pencil and paper questionnaire in about 15 minutes. - half coefficient was .55. The reliability coefficients of individual items ranged from .2 to .9 for the 19 questions.

The items were grouped into three categories. The first contained three items about usual drinking patterns

Since the questions in the Chinese translation were not worded in such a way as to make possible the calculation of a quantity-frequency index. only descriptive information could be determined. Chi-square analyses were used to compare the responses of male and female students.

Limitations of the Study

Only items considered relevant to the culture by the Chinese author's department were selected. They were translated by this author and her colleagues at Guangxi Medical University into Chinese. Some items were modified to make them more appropriate. For example, "driving a car" was changed to "riding a motor bike or bike." The Chinese version was then "backtranslated" into English for comparison with the original items. In spite of this process, the same questions may not have had the same or exactly equivalent meanings in Guangxi province.

Another limitation of the study was that the sample was not randomly selected from all undergraduate students from the two universities. This convenience sample is limited to those students who were assigned to a particular study classroom and for whom permission to administer the questionnaire was granted.

RESULTS

Drinking Patterns of Male and Female Students

Male students in this sample reported they consumed alcohol significantly ($\chi^2 = 48.3$, $df = 4$, $p < .001$) more frequently compared to females. Both males

Table 2.
Chi-Square Analysis Comparing the Drinking Patterns of Male and Female Students

Usual drinking pattern	Males (%)	Females(%)
Frequency of drinking among all students: ^a		
Daily	10.0	2.6*
Once a week but not daily	19.1	7.6
At least once a month but less than once a week	33.6	24.4
Holiday	29.1	12.8
Not at all	8.2	52.6
Type of beverage consumed by drinkers: ^b		
Beer	59.4	78.4
Chinese medicine wine	28.7	13.5
Light wine (<15% alcohol)	5.0	5.4
Medium wine (15-30% alcohol)	5.9	0.0
Strong wine (30% alcohol)	1.0	2.7
Usual amount consumed by drinkers: ^b		
<50mL	27.6	61.0 ⁺
50-100mL	39.2	25.0
100-150mL	21.8	5.6
150-200mL	8.0	2.8
200-250mL	3.4	5.6
250mL	0.0	0.0

^a Males, N =110, Females, N= 78.

^b Males, N = 101, Females, N = 37.

⁺P < .05 *p < .001.

to females (see Table 2 and females reported beer as the most commonly used beverage. Chinese medicine wine or "tonic" was the second most commonly consumed alcohol beverage by both groups. Males consumed significantly ($\chi^2 = 14.4$, $df = 4$, $p < .05$) more alcohol compared).

Drinking Related Behaviors and Problems Related to Alcohol

There was a significant difference between males and females ($\chi^2 = 29.1$, $p < .001$) in the setting of their first drinking experience. However, there was no difference between gender in place or situation of usual alcohol consumption (see Table 3).

A significantly higher percentage of males reported problems resulting from drinking with the exception of "having got into trouble with the school administration" because of drinking too much.

Table 3.

Chi-Square Analysis Comparing the Percentage of Male (N = 101) and Female (N= 37) Students Reporting Drinking-Related Behaviors or Problems

Behavior	Males (%)	Females (%)
1. Situation of first drink:		
Alone	8.5	5.9*
With friends	60.7	26.6
With parents	10.6	52.9
With siblings	4.3	8.8
With other relatives	8.5	2.9
Other adults	7.4	2.9
2. Situation of usual consumption:		
Alone	7.8	5.5
With friends	42.6	27.0
With parents	5.0	10.8
With siblings	2.0	8.1
With other relatives	4.0	5.4

Other adults	38.6	43.2
3. Has consumed alcohol with parents	76.2	78.4
4. Has consumed alcohol alone	50.5	35.1
Has experienced following problems related to drinking:		
5. Hangover	53.2	15.4*
6. Nausea and vomiting	21.8	2.6*
7. Driving motor bike (or bike) after drinking	43.6	10.4*
8. Missed class because of hangover	11.8	2.6 ⁺
9. Been criticized by close friend because of drinking too much	23.6	3.8
10. Received a lower grade because of drinking too much	8.2	1.3 ⁺
11. Been in trouble with school administration because of drinking too much	8.2	2.6

+p < .05; *p < .001.

Table 4.

Chi-Square Analyses Comparing the Percent of Male (N = 101) and Female (N = 37) University Students Reporting Various Attitudes Toward Drinking or Perceived Attitudes of Significant Others

Attitudes	Males (%)	Females (%)
Would consume alcohol if there was no social pressure to do so	19.0	2.7 ⁺
Would feel uneasy about acknowledging use of alcohol to a person whom they knew did not approve of its use	48.5	38.9
Father approves of their alcohol consumption	49.5	58.3
Mother approves of their alcohol consumption	41.6	54.1

Thought that a teacher would be displeased with them if they consumed alcohol 33.7

21.6

* $p < .05$.

Attitudes and Perceived Attitudes of Significant Others

Of the five attitudinal items, only one yielded a significant ($\chi^2 = 5.7$, $df = 1$, $p < .05$) difference between males and females; a higher percent of males said they would consume alcohol if there were no social pressure to do so (see Table 4).

DISCUSSION

The results appear to confirm previous findings of males and females in general and university students in particular. In this sample of students, as was found by Isralowitz and Hong (1988) among Chinese students in Singapore, beer was the beverage of preference. Chinese medicine wine was the next most common beverage consumed. Such wine is considered a tonic which will increase virility and health. As has been found in other studies of Chinese cultures outside the People's Republic, males were more likely to consume alcohol and to do so with greater frequency and in greater quantity consistent with other studies. Males also reported their first drinking experience with friends whereas females with family. Consistent with other studies of university students in western cultures, males also reported more problems related to alcohol compared to the female students.

The lack of differences between males and females for items concerning perceived attitudes on the part of parents and a respected authority figure toward their drinking may reflect the general acceptance of alcohol use for both sexes among this Chinese sample. These results appear to mirror earlier observations that suggest moderate alcohol consumption is widely accepted throughout Chinese culture. Alternatively, the lack of differences in perceived attitude could be reflective of the social forces which have attempted to diminish inequality between the genders over the past few decades. Given the continuing changes in Chinese society including industrial urbanization, it will be important to examine drinking-related behaviors and attitudes over time.

ACKNOWLEDGMENTS

Dr. Engs would like to thank the following individuals and Indiana University for their help: Chun-Ying Chen for her back translation of the Chinese version of the *Student Alcohol Questionnaire*, and David Kocejka and John V. Samuel for statistical

and computer consultation. This study was funded by Indiana University and Guangxi Medical University.

REFERENCES

- AHERN, F. M. (1985). Alcohol use and abuse among four ethnic groups In Hawaii: Native Hawaiians, Japanese, Filipinos, and Caucasians. In D. Speigler, D. Tate, S. Aitken, and C. Christian (Eds.), *Alcohol Abuse among U.S. Ethnic Minorities*. Rockvill, MD: National Institute on Alcohol Abuse and Alcoholism, pp. 315-328.
- AKUTSU, P. D., SUE, S., NOLAN, W. S. S., and NAKAMURA, C. Y. (1989). Ethnic differences in alcohol consumption among Asians and Caucasians in the United States: An investigation of cultural and physiological factors. *J. Stud. Alcohol* 50: 261-267.
- CHI, I., KITANO, H. H. L., and LUBBEN, J. E. (1988). Male Chinese drinking behavior in Los Angeles. *J. Stud. Alcohol* 49: 21-25.
- CHI, I., LUBBEN, J. E., and KITANO, H. H. L. (1989). Differences in drinking behavior among three Asian-American groups. *J. Stud. Alcohol* 50: 15-23.
- ENG, R. C. (1974). *The Student Alcohol Questionnaire*. Bloomington, IN.
- ENG, R. C., and ALDO-BENSON, M. (1995). The association of alcohol consumption with self-reported illness in university students, *Psychol. Rep.* 76: 727-736.
- ENG, R. C., and HANSON, D. J. (1994). The Student Alcohol Questionnaire: An updated reliability of the drinking patterns, problems, knowledge, and attitudes subscales. *Psychol. Rep.* 74: 12-14.
- FEI-PENG, ZHANG (1982). Drinking in China. *Drink. Drug Pract. Surv.* 18: 12-15.
- GRANET, M. (1957). *Chinese Civilization*. London: Barnes and Noble.
- GU, YU-E, and PEN-FENG, Y. (1993). *The Viewpoint of Different Level Leaders for Health Education Contents*. Presented at the First National Ethnic Nationalities Health Education Conference of the People's Republic of China. Nanning.
- GUANGXI YEARBOOK EDITORIAL GROUP (1992). *Guangxi Yearbook*. Nanning. 1992.

- HANSON, D. J., and ENGS, R. C. (1990). Gender differences in drinking patterns and problems among college students: A review of the literature. *J. Alcohol Drug Educ.* 35(2).
- HAYWORTH-HOEPPNER, S., GLOBETTI, G., STEM, J., and MORASCO, F. (1989). The quantity and frequency of drinking among undergraduates at a southern university. *Int. J. Addict.* 24: 829-857.
- HELZER, J. E., CANINO, G. J., YEH, E. K., BLAND, R. C., LEE, C. K., HWU, H. G., and
NEWMAN, S. (1990). Alcoholism-North America and Asia. *Arch. Gen. Psychiatry* 47: 313-321.
- HSU, F. L. K. *Americans and Chinese* (1970). New York, NY: Natural History Press.
- ISRALOWITZ, R., and HONG, A. T. (1988). Singapore: A study of university students' drinking behavior. *Br. J. Addict.* 83: 1321-1323.
- KITANO, H. H. L., and CHI, I. (1985). Asian Americans and alcohol: The Chinese, Japanese, Koreans, and Filipinos in Los Angeles. In D. Spiegler, D. Tate, S. Aiken, and C. Christian (Eds.), *Alcohol Abuse among U.S. Ethnic Minorities*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism, pp. 373-382.
- KLATSKY, A. L., FRIEDMAN, G. D., SIEGELAUB, A. B., and GERARD, J. J. (1972). Alcohol consumption among White, Black, or Oriental men and women. *Am. J. Epidemiol.* 105:311-232.
- LABARRE, W. (1946). Some observations on character structure in the Orient. II. The Chinese. Part Two. *Psychiatry* 9: 375-395.
- LEMARCHAND, L., KOLONEL, L. N., and YOSHIZAWA, C. N. (1985). Alcohol consumption patterns among the five major ethnic groups in Hawaii: Correlations with the incidence of esophageal and oropharyngeal cancer. In D. Spiegler, D. Tate, S. Aiken, and C. Christian (Eds.), *Alcohol Abuse among U.S. Ethnic Minorities*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism, pp. 355-371.
- PAI, S. M. (1991). *Smoking and Alcohol Consumption Behaviors in Chinese Graduate Students and American Students: A Comparative Study*. Unpublished M.S. thesis, State

University of New

York at Binghamton.

SAMUELSON, J. (1878). *The History of Drink*. London: Trubner and Co.

SUE, S., KITANO, H., HATANAKA, H., and YEUNG, W. T. (1985). Alcohol consumption among

Chinese in the United States. In L. Bennett, and G. Ames (Eds.), *The American Experience*

with Alcohol. New York, NY: Plenum, pp. 359-371.

WEATHERSPOON, A. J., DANKO, G. P., and JOHNSON, R. C. (1984). Alcohol consumption and

use norms among Chinese Americans and Korean Americans. *J. Stud. Alcohol* 45: 203-206.

YU, E. K., LIU, W. T., and KURZEJA, P. (1984). *Physical and Mental Health Status Indicators for*

Asian/Pacific Americans. Report Prepared for the Task Force on Black and Minority

Health. Bethesda, MD: National Institute of Health.

YU, E. S. H., and LIU, W. T. (1986/1987). Alcohol use and abuse among Chinese-Americans.

Alcohol Health Res. World pp. 14-17, 60-61.

YU, E. S. H., LUI, W. T., XIA, Z., and ZHANG, M. (1985). Alcohol use, abuse, and alcoholism

among Chinese Americans: A review of the epidemiologic data. In D. Spiegler, D. Tate, S.

Aiken, and C. Christian (Eds.), *Alcohol Abuse among U.S. Ethnic Minorities*. Rockville,

MD: National Institute on Alcohol Abuse and Alcoholism, pp. 329-341.

*To whom reprint requests should be addressed at Poplars 615, Indiana University, Bloomington, IN 47405, USA.

RESUMEN

Se dio a rellenar a una muestra de 190 estudiantes de dos universidades de Nanning, China, una traduccion al chino del Cuestionario sobre el Consumo de Alcohol por Estudiantes (Student Alcohol Questionnaire). Los varones consumian alcohol con mas frecuencia y en mayores cantidades que las hembras (diferencia significativa, $p < 0.05$). Una proporcion significativamente mayor de varones tambien tuvieron problemsas a causa de su consumo de bebidas alcoholicas. La cerveza era la bebida alcoholica preferida por ambos sexos. La mayoria de los estudiantes de ambos sexos bebian con sus amigos, y la mayoria tambien habia consumido bebidas alcoholicas con sus padres; aproximadamente la mitad dijeron que sus padres aprobaban su consumo de alcohol. Los resultados apoyan las abservaciones hechas anteriormente de

que el consumo moderado de bebidas alcohólicas está aceptado ampliamente en la cultura china y de que produce pocos problemas.

RESUME

Traduit en chinois, le *Questionnaire sur la consommation d'alcool en milieu étudiants*, a été complété par 190 étudiants de deux universités de Nanning en Chine.

Les étudiants de sexe masculin consomment de l'alcool beaucoup plus fréquemment et en plus grande quantité que les étudiants de sexe féminin. Une proportion plus importante d'étudiants masculins semble présenter quelques troubles de comportement après avoir consommé de l'alcool. La bière est la boisson alcoolisée de choix pour les étudiants des deux sexes. La plupart des étudiants boivent avec leurs amis et consomment en compagnie de leurs parents; à peu près la moitié des étudiants indiquent que leurs parents n'objectent pas à ce qu'ils consomment de l'alcool.

Les résultats de l'étude viennent appuyer les observations préliminaires selon lesquelles une consommation modérée d'alcool est acceptée à grande échelle dans la culture chinoise, et entraîne des troubles de comportement moindres.

THE AUTHORS

Zhuo-Ping Lu is a lecturer in the Department of Hygiene at Guangxi Medical University, in Nanning, Guangxi Province of the People's Republic of China. She has a medical degree from that university with a focus in pediatrics. She is interested in international health education and collaborative research with other countries.

Ruth C. Engs, Professor of Applied Health Science, Indiana University, Bloomington, is the author of numerous publications. In 1995 she was editor for a special issue of *Addiction Research: Alcohol Use in Cultural and Historical Perspectives*. Since the mid-1970s she has accomplished widely cited research of university students drinking patterns and health issues in several cultures. She and David Hanson have jointly examined trends in drinking among collegians in the United States.

David J. Hanson is Professor of Sociology at the State University of New York at Potsdam. He is the author of over 275 publications, one of the most recent being *Preventing Alcohol Abuse: Alcohol, Culture and Control*. His research is reported in textbooks in over a dozen disciplines. Since the early 1980s he has collaborated with Ruth Engs on nationwide longitudinal research of drinking patterns and problems among university and college students.